

Title (en)
IMPROVED RECHARGEABLE LEAD-HYDROGEN ELECTRICAL CELL

Publication
EP 0114484 B1 19880907 (EN)

Application
EP 83307646 A 19831215

Priority
US 45984183 A 19830121

Abstract (en)
[origin: EP0114484A2] An improvod rechargeable lead-hydrogen electrochemical cell is provided which comprises a cell stack secured to a retainer and disposed within a pressure vessel containing hydrogen gas. The stack includes a positive electrode comprising lead oxide, a pair of gas-porous negative electrodes containing a catalyst, a pair of separators and a pair of gas screens. The stack components are saturated with sulfuric acid electrolyte. Each of the negative electrodes has a separator disposed on one side thereof and a gas screen disposed on the opposite side thereof. The pressure vessel contains a gas inlet, and electrical leads connect to, respectively, the positive and negative electrodes and exit the pressure vessel. In the charged form, the cell reactants exist as lead oxide and hydrogen gas. When the cell is discharged, the lead oxide is reduced to lead sulfate and the hydrogen gas is oxidized at a catalytic surface to hydrogen ion. The cell has a lower cost with fewer technical problems, has a higher specific energy density and has a superior performance, relative to conventional metal hydrogen cells.

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H01M 10/34; **H01M 4/86**

IPC 8 full level
H01M 4/86 (2006.01); **H01M 10/34** (2006.01); **H01M 12/08** (2006.01)

CPC (source: EP US)
H01M 4/86 (2013.01 - EP US); **H01M 10/345** (2013.01 - EP US); **Y02E 60/10** (2013.01 - EP); **Y02E 60/50** (2013.01 - EP)

Cited by
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EP 0114484 A2 19840801; **EP 0114484 A3 19850731**; **EP 0114484 B1 19880907**; CA 1205130 A 19860527; DE 3377962 D1 19881013; JP S59141176 A 19840813; US 4467020 A 19840821

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